

REMARKS

Claims 1-50 are pending in this application. Of these pending claims, Claims 1-15, 26-46, 49, and 50 stand rejected; and Claims 16-25, 47, and 48 stand withdrawn. By way of this paper, Claims 1 and 11 have been amended.

The foregoing amendments and following remarks are believed to be fully responsive to the outstanding office action, and are believed to place the application in condition for allowance.

Claim Rejections – 35 U.S.C. § 103

Claims 1-4, 6, 10-12, 26-36, 39-40, and 44-46 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Sievers et al. ('441) reference in view of the Coulter ('949) reference.

Claims 5 and 37-38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Sievers et al. ('441) reference in view of the Coulter ('949) reference as applied to claims 1-4, 6, 10-12, 26-36, 39-40, and 44-46, and further in view of the Matsumoto et al. ('456) reference.

Claims 7-8, and 41-42 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Sievers et al. ('441) reference in view of the Coulter ('949) reference as applied to claims 1-4, 6, 10-12, 26-36, 39-40, and 44-46, and further in view of the Shrivastava et al. ('401) reference.

Claims 9 and 43 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Sievers et al. ('441) reference in view of the Coulter ('949) reference as applied to claims 1-4, 6, 10-12, 26-36, 39-40, and 44-46, and further in view of the Ishikawa et al. ('347) reference.

Claims 13-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Sievers et al. ('441) reference in view of the Coulter ('949) reference as applied to claims 1-4, 6, 10-12, 26-36, 39-40, and 44-46, and further in view of the Wang ('980) reference.

Independent Claims 1 and 11 have been amended to more clearly point out that the mixture of a fluid and a solvent free marking material is thermodynamically metastable. Support for this amendment can be found on at least page 12, line 10 of Applicants' invention. Applicants respectfully submit that the prior art cited above does not disclose this feature.

In this regard, Applicants submit that the Sievers et al. ('441) reference describes a one step process for producing fine particles. However, this one step process is limited to substances which are soluble in supercritical fluids (col. 1, lines 53-55). As such, the object of the invention disclosed in the Sievers et al. ('441) reference is the formation of fine particles of substances which do not readily go into solution in supercritical fluids (col. 3, lines 8-11).

The Sievers et al. ('441) reference accomplishes this objective by using a two step particle formation process. The two step process for forming fine particles includes first dissolving (or suspending) a substance in a first nongaseous fluid to form a first solution (or suspension), and then mixing the first solution (or suspension) with a second nongaseous fluid to form a composition having the first solution (or suspension) and the second nongaseous fluid (Abstract; Col. 4, lines 17-34; col. 4, line 61 – col. 5, line 7). Accordingly, using the two step formation process disclosed in the Sievers et al. ('441) reference requires that a substance be first dissolved or dispersed in a fluid which is then (referring to the solution or dispersion of the substance and the fluid) suspended or dispersed in a supercritical fluid.

In contrast, Applicants' invention discloses a one step fine particle formation process using a thermodynamically metastable mixture of a fluid and a solvent free marking material. In this sense, metastable refers or relates to the unstable and transient but relatively long-lived state of a chemical or physical system. As the mixture is thermodynamically metastable, Applicants' invention does not require a two step fine particle formation process in which a marking material is first dissolved (or suspended) in a first nongaseous fluid to form a first solution (or suspension) prior to the first solution (or suspension) be mixed with a second nongaseous fluid. Instead, this feature contributes to the one step fine particle formation process described in Applicants' invention. Claims 2-10, 12-15, 26-46, 49, and 50 depend from either Claim 1 or Claim 11. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §103 rejection of Claims 1-15, 26-46, 49, and 50 is respectfully requested.

Additionally, the marking material is solvent free prior to mixing with the fluid to form the thermodynamically metastable mixture of Applicants' invention. In this sense, the marking material of Applicants' invention is not first dissolved (or suspended) in a first nongaseous fluid to form a first solution (or suspension)

prior to being mixed with the fluid of Applicants' invention. This feature also contributes to the one step fine particle formation process described in Applicants' invention.

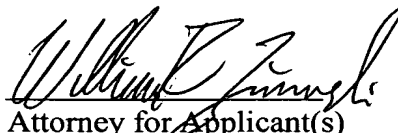
However, if additional surfactants and/or dispersant material(s) are desired for a given application, the additional material(s) can be added to the formulation reservoir(s) with the marking material and the fluid, as described on at least page 11, lines 3-8 and page 11, line 24-29. As such, Applicants' invention has the ability to maintain one step fine particle formation while increasing the number and types of marking materials suitable for use with the system. Claims 2-10, 12-15, 26-46, 49, and 50 depend from either Claim 1 or Claim 11. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §103 rejection of Claims 1-15, 26-46, 49, and 50 is respectfully requested.

CONCLUSION

It is respectfully submitted that, in view of the above amendments and remarks, this application is now in condition for allowance, prompt notice of which is earnestly solicited.

The Examiner is invited to call the undersigned in the event that a phone interview will expedite prosecution of this application towards allowance.

Respectfully submitted,


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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.